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## SCOPING DOCUMENT

### TVX MINERAL HILL MINE Reclamation Plan Modifications

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## INTRODUCTION

The TVX Mineral Hill Mine (TVX) is a hardrock underground gold mine located 5 miles northeast of Gardiner, Montana. On July 14, 1986, following completion of an Environmental Impact Statement, the Montana Department of State Lands issued Hard Rock Mine operating permit No. 00100 to the Mineral Hill Mine. Since that time, the permit has been supplemented by one Amendment and 18 modifications. When necessary, an Environmental Assessment was prepared for these changes. The permit, as it exists today, includes an approved reclamation plan. The mine has ceased operation and the operator is preparing to fully reclaim the mine site.

Amerikanuak, Inc., the operator of the mine for TVX, is proposing changes to the existing reclamation plan. The Montana Department of Environmental Quality (DEQ) will analyze these proposed changes in an EIS to determine their environmental effects. Only the proposed changes to the existing operating plan will be evaluated in the EIS. Reclamation requirements that are not being changed will not be evaluated in this EIS unless they are considered connected actions. These requirements have already undergone previous permitting and environmental review.

This scoping document will update you on the proposed project and the EIS decision-making process. This is the second scoping document to be issued and further defines the relevant issues based on the public and agency comments received so far. The agencies welcome your comments on the issues that you believe should be addressed in the EIS.

## APPLICABLE LAWS AND REGULATIONS

### Agency Responsibilities

Several federal, state and local agencies have authority or responsibilities which they may choose to exercise in evaluating or permitting an action such as that proposed by TVX.

The Montana Department of Environmental Quality (DEQ) and the Gallatin National Forest (GNF) are cooperating agencies for this project. Mark Simonich, Director of DEQ, is the responsible decision-making official for the final closure plan at TVX. A December 11, 1989, Memorandum of Understanding (MOU) between the State of Montana and the U.S. Department of Agriculture, Forest Service, promotes efficiency and effectiveness in the administration and regulation of

locatable mineral activities under the agencies' respective authorities and responsibilities. This MOU provides for the preparation of joint environmental analyses, sharing of information, personnel, and funds.

### State Laws

#### Metal Mine Reclamation Act (MMRA)

DEQ administers the Montana Metal Mine Reclamation Act (MMRA) (Title 82, Chapter 4, Part 3, MCA) and its regulations (ARM 17.24.101 et seq.), under which TVX has submitted a Final Closure Plan to its operating permit # 00100. The purpose of the MMRA (82-4-101 et seq.) is to ensure that the usefulness, productivity, and scenic value of lands and surface waters involved in mining and exploration receive the greatest reasonable degree of protection and reclamation to beneficial use. The Act and its regulations set forth the steps to be taken and the reclamation measures that must be required in the applicant's proposed Final Closure Plan. The act applies to private, federal and state lands within Montana.

The Forest Service doesn't currently regulate TVX's operating permit under the Forest Service's authority to regulate all activities and uses of National Forest System lands (Organic Administration Act of 1897 and 36 CFR 228). After the final EIS has been issued, DEQ will make a decision regarding SMC's permit amendment request. The decision will be documented in a Record of Decision (ROD). The process will lead to one of the following possible decisions: the Director of DEQ must decide whether to approve: 1) TVX's existing closure plan (i.e. the No-Action alternative), 2) TVX's proposed Final Closure Plan, or 3) an agency modified final closure plan.

The proposal, if approved, must comply with all applicable federal and state air and water quality laws and regulations.

A finding that the final closure plan alternative would violate laws administered by DEQ, would be grounds for DEQ to deny that final closure plan (82-4-351, MCA)

#### Montana Environmental Policy Act (MEPA)

Procedures governing the decision-making process on state and private lands in Montana are defined in administrative rules implementing the Montana Environmental Policy Act of 1971 (MEPA). MEPA is a state law that directs DEQ to disclose effects of state actions on state, federal, and private lands to the public and officials making decisions concerning the proposal.

The MEPA process began when TVX proposed to submit its Final Closure Plan.

DEQ rules (ARM 17.4.601 et seq.) implementing the Montana Environmental Policy Act (MEPA) (Title 75, Chapter 1, MCA) require preparation of an environmental assessment. An Environmental Assessment (EA) has several purposes:

1. It serves to ensure that the agency uses the natural and social sciences and the environmental design arts in planning and decision-making;
2. It assists in the evaluation of reasonable alternatives and the development of conditions, stipulations or modifications to be made a part of a proposed action;
3. It determines the need to prepare an EIS through an initial evaluation and determination of the significance of impacts associated with a proposed action;
4. It ensures the fullest appropriate opportunity for public review and comment on proposed actions, including alternatives and planned mitigation, where the residual impacts do not warrant an EIS; and
5. It examines and documents the effects of a proposed action on the quality of the human environment, and provides the basis for public review and comment.

MEPA requires that if any action taken by a state agency may "significantly affect the quality of the human environment," an environmental impact statement (EIS) must be prepared. The National Environmental Policy Act of 1969 as amended (NEPA) has a similar decision-making process requirement for federal agencies when a proposed project that may "significantly affect the human environment" would be located on federal lands.

TVX has agreed that an EIS will be prepared to evaluate the proposed changes in the Final Closure Plan. The EA process will not be implemented because TVX has agreed to an EIS. The EIS would be produced to ensure MEPA compliance.

#### Montana Antiquities Act

The State Historic Preservation Office (SHPO) is responsible for cooperating with and advising DEQ when potentially valuable historical, archeological, or other cultural resources are located within a project area (Montana Antiquities Act Sections 22-3-401 through 22-3-442, MCA, and the National Historic Preservation Act [P.L. 89-665 as amended and re-authorized E.O. 11593]). Advice given to DEQ may include comments on an applicant's plan for impact mitigation of sites eligible for nomination to the National Register of Historic Places. This office also reviews the EA or EIS to ensure compliance with cultural regulations.

The SHPO issues antiquities permits for projects on state lands. The office also seeks determinations from

the Keeper of the National Register for sites believed eligible for listing on the National Register of Historic Places. During mine operation, DEQ is responsible for monitoring compliance with historic preservation and monitoring plans.

The SHPO or the Federal Advisory Council on Historic Preservation is also responsible for cooperating with federal agencies for any action on federal lands which may affect historic or cultural properties on those lands (National Historic Preservation Act, Archeological Resource Protection Act).

#### Clean Air Act

The Air and Waste Management Bureau of DEQ administers the Clean Air Act of Montana (Title 75, Chapter 2, MCA). Any proposed project with potential to emit more than 25 tons per year of any pollutant must obtain an air quality permit before construction. The applicant must apply best available control technology (BACT) to each emission source. The applicant must also demonstrate that the project would not violate state or federal ambient air quality standards.

TVX was required to comply with all air quality standards during operations. Both closure alternatives may contribute particulates to the air during reclamation, but they would be of short duration and not exceed Montana air quality standards. The proposed alternatives comply with the Clean Air Act.

#### Water Quality Act

DEQ is also responsible for administration of the Montana Water Quality Act (Title 75, Chapter 5, MCA), classifying surface waters, establishing surface water quality standards, and administering permit programs to control the discharge of pollutants into state waters.

A Montana Pollutant Discharge Elimination System (MPDES) permit or Montana Groundwater Pollution Control System (MGWPCCS) permit is required before any discharge to surface water or groundwater may occur. Depending on the type of activity, MPDES permits are either general or individual. Industrial or municipal discharges require an individual permit.

Part of the MPDES general permit is controlling storm water discharge. The intent of a storm water permit is to minimize or eliminate waste discharge (including sediments, metals, petroleum products, etc.) via storm water runoff from mining operations.

TVX has MPDES permits for stormwater and surface water discharges. During operations, all precautions were made to ensure that sediment and runoff water do

not get to surface or groundwater resources. The EIS will review the closure plan alternatives to ensure the project would stay in compliance with Montana water quality standards.

#### **Yellowstone National Park – State of Montana Compact**

TVX must receive a permit from the Montana Department of Natural Resources and Conservation (DNRC) to drill a well on private land. This permit would ensure that the well would not violate the Yellowstone Compact and protect geothermal resources. If any additional wells are required as a result of the EIS, TVX would have to apply for a permit.

#### **Other Laws**

##### **County Noxious Weed Act**

The Park County Weed Board administers the County Noxious Weed Act (7-22-2101 through 2153, MCA) for any disturbed lands within their jurisdiction. TVX has an approved weed management plan. DEQ would ensure the final closure plan alternative selected addresses the County Noxious Weed Act and includes measures to help limit noxious weeds.

##### **Federal Laws**

The Forest Service does not have a regulatory role in reviewing and approving the closure plan. The Forest Service is interested in this process and has particular expertise that will assist the analysis because the Gallatin National Forest surrounds the property. As a result, DEQ has asked the USDA Forest Service Region 1, Gallatin National Forest, Gardiner Ranger District, to be a cooperating agency on the production of an environmental document for the TVX Mineral Hill Mine Final Closure Plan per the Montana Environmental Policy Act (MEPA) rules (ARM 17.4.626(1)(a)).

In addition, TVX and the Forest Service have been discussing the final disposition of the mine land holdings after reclamation is complete. TVX has announced it wants to donate the lands to the Forest Service after reclamation is complete. The Forest Service has indicated it may be able to accept the lands if certain conditions are met. As a result, DEQ wants to ensure that alternatives analyzed in the environmental document consider potential future Forest Service management and public use of the property. Under MEPA rules, the Forest Service can be a cooperating agency and lend its experience and/or special expertise to the process even though it does not have any regulatory authority. DEQ will consider Forest

Service's potential future management of the area in DEQ's decision on the final closure plan.

##### **Endangered Species Act of 1973**

The U.S. Fish and Wildlife Service (USFWS) administers the Endangered Species Act (ESA) and the Bald Eagle Protection Act. Under Section 7 of the Endangered Species Act, each federal agency must ensure that any action authorized, funded, or carried out is not likely to jeopardize the continued existence of any threatened or endangered species. If a threatened or endangered species, or species proposed for listing occurs in an area where a project is proposed, a Biological Assessment (BA) must be conducted. If the action would result in a "may affect" determination for the species, formal consultation with the U.S. Fish and Wildlife Service must occur and they will issue a Biological Opinion. If the action results in a "not likely to adversely affect" or "beneficial effect" conclusion, formal consultation is not necessary but informal consultation and a letter of concurrence must be obtained from the U.S. Fish and Wildlife Service. If a "no effect" results, no consultation is necessary. To reduce effects of an action to an acceptable level, mitigation (coordination measures) may be necessary.

DEQ would ensure compliance with the Endangered Species Act, Section 7, by cooperating with the Forest Service.

##### **Heritage Program Laws**

Several federal laws provide for preservation of historic, prehistoric, and other cultural resources. These include the National Historic Preservation Act (NHPA), the American Indian Religious Freedom Act (AIRFA), and the Native American Graves Protection and Repatriation Act (NAGPRA). These laws essentially require that adequate and extensive review of these undertakings be conducted in order to assess the possible effects of these activities upon cultural resources. They also provide that Federal agencies conduct adequate consultation with pertinent tribes in order to be informed of any possible conflicts an undertaking would have on their ability to conduct traditional religious practices.

The project area has been surveyed for the presence of cultural resources. DEQ will coordinate with the Forest Service to ensure the closure plan alternative selected is consistent with these laws.

##### **National Historic Preservation Act**

See Montana Antiquities Act above.

##### **Environmental Justice**

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and Departmental Regulation 5600-2 direct federal agencies to integrate environmental justice considerations into federal programs and activities. Environmental justice means that, to the greatest extent practicable and permitted by law, all populations are provided the opportunity to comment before decisions are rendered on, are allowed to share in the benefits of, are not excluded from, and are not affected in a disproportionately high and adverse manner by government programs and activities affecting human health or the environment.

The project itself is outside of populated areas above the town of Gardiner, thus not impacting any rural development areas. Hence, no groups would be affected in a disproportionately high and adverse manner by this project. DEQ would consult with the Forest Service to ensure the alternative closure plan selected would comply with this statute.

#### **Federal Cave Resources Protection Act**

The Forest Service also must address actions that could affect caves under the Federal Cave Resources Protection Act.

The Forest Service will cooperate with the DEQ to ensure any caves on the property are addressed under the Federal Cave Resources Protection Act.

## **THE PERMITTING AND ENVIRONMENTAL IMPACT STATEMENT PROCESSES**

#### **Completeness Review of Application.**

When DEQ, the USFS, and other cooperating state and federal agencies review an application for revising or amending the approved permit/plan of operations they jointly review it to determine if it is complete. DEQ has not yet declared TVX's application complete. After reviewing the application, the agencies have requested clarification of components of the proposal and other additional information. When the agencies have determined that all the required information has been submitted, DEQ will declare the application complete. TVX has submitted responses to the agencies' first set of completeness questions. The first set of questions and responses are usually the most detailed and the most likely to result in modifications to the company's proposal. Subsequent completeness questions usually include requests for further clarification rather than requests to modify the proposal or submit new data or plans.

#### **The EIS Process.**

The two cooperating agencies may initiate the EIS process either during the review for completeness or after completeness has been determined. The EIS process for TVX's proposed Final Closure Plan began before the application was declared complete. Additional questions regarding the adequacy of baseline information or the proposal may arise after completeness is declared or at any time during EIS preparation. Any information necessary to complete the environmental analyses must be submitted by TVX. All information submitted by TVX for either completeness or adequacy are available for public review at the cooperating agencies' offices during business hours and on the DEQ Website [www.deq.mt.us](http://www.deq.mt.us).

#### **The Scoping Process**

The main environmental analysis phase of the EIS process will begin after scoping is completed. *Scoping* is the collection of written and verbal comments from the public, which helps the agencies identify environmental issues associated with the project. Scoping began when TVX submitted the Final Closure Plan on February 1, 2000. A press release notice to discuss the Final Closure Plan was sent out to announce a public meeting that was held in Gardiner on March 15, 2000. The first scoping document was mailed out on April 4, 2000. TVX sponsored a workshop on May 22, 2000 which DEQ and the US Forest Service attended. A formal scoping meeting will be held in Gardiner on June 15, 2000. Scoping comments will be accepted at the scoping meeting or by mail until July 1, 2000.

Comments on the Closure Plan have been received from Bear Creek Council, Yellowstone National Park, Greater Yellowstone Coalition, US Forest Service, and private citizens (Depuy, Hoak, McPhie, Monninger, Gallaher).

The EIS will present an analysis of the issues as they relate to the physical, biological, social and economic effects of the proposed project and various alternatives. The EIS also will include analysis of the impacts of the project in combination with other past, present, or reasonably foreseeable activities in the project area. The analysis will focus on significant and substantive issues identified during scoping.

Environmental issues initially identified by the agencies are listed at the end of this document in a draft Issue Disposition Summary. The list of issues will be revised to include additional issues submitted by the public at the next scoping meeting, or by mail.

The agencies will develop alternatives in response to the significant and substantive issues identified during

scoping. Reasonable alternatives will be developed to provide a clear basis for choice among options by the decision maker and the public. Mitigation measures will be identified to avoid, minimize or reduce the magnitude or intensity of the potential adverse impacts. The agencies also will analyze the "no action" alternative which is used as the basis for comparisons. The "no action" alternative assumes the existing approved closure plan would be implemented.

#### **Public Participation**

DEQ and the USFS encourage your participation in the EIS process. You may submit oral or written comments at the public scoping meeting or by mail.

After publication and distribution of the draft EIS, the agencies will solicit public comment on the environmental impact analysis. A final EIS will address all substantive public comments.

### **DETAILED INFORMATION AVAILABLE**

A copy of the mine permit application can be reviewed at:

- Montana Department of Environmental Quality, Helena, MT
- Gallatin National Forest, Gardiner Ranger District, Gardiner, MT
- Gardiner Public School Library
- Gardiner Community Library; and
- Yellowstone National Park, Headquarters Historical Library, in Mammoth WY
- DEQ will post portions of the CCP on the DEQ web site at [www.deq.state.mt.us](http://www.deq.state.mt.us)

If you have any questions, please contact Patrick Plantenberg, DEQ, at (406) 444-4960 or Mike Burnside, Forest Service, Region 1, at (406) 329-3565 or at the addresses listed on the cover of this document.

### **PROPOSED CHANGES TO THE TVX MINE RECLAMATION PLAN**

The information presented below outlines the major proposed plan changes that will be evaluated in the EIS. The requirements of the existing plan are presented followed by the changes to the plan proposed by TVX. A detailed evaluation of each one of the major changes

and its significance is in the attached draft Issue Disposition Summary.

#### **A. Tailings Storage Facility**

##### *Existing Plan*

A 24-inch-thick cap would be placed over the tails, consisting of 9 inches of tailings mixed with bentonite clay (may use Old Tailings South (OTS) tails for this), a 3 inch gravel drain layer, and 12 inches of topsoil.

##### *Proposed Plan Changes*

The cap design would be modified to a thickness of 48 inches consisting of 36 inches of sandy gravel and 12 inches of topsoil.

#### **B. Seepage From Tailings Storage Facility**

##### *Existing Plan*

Seepage would be evaporated from the seepage collection pond or used to irrigate the revegetation on the impoundment surface. When seepage rates become negligible and the seepage meets water quality standards, the seepage collection pond would be left as a small lake. There was no consideration given to active or passive treatment of tailings seepage.

##### *Proposed Plan Changes*

The tailings seepage would be treated in an underground biological treatment system. Outflow from the system would be pumped to a sub-irrigation system north of the tailings storage facility where it would be mixed with water from the Crevice adit and discharged to the soil.

#### **C. Old Tailings South Reclamation**

##### *Existing Plan*

The old tailings south (OTS) deposit is a historic deposit of tailings in the permit area. The OTS is permitted to be completely excavated and disposed of in the lined tailings storage facility. About 40% of the tailings have already been deposited in the tailings storage facility.

##### *Proposed Plan Changes*

None

#### **D. Crevice Adit**

##### *Existing Plan*

The existing plan calls for the installation of a portal plug constructed with grouted aggregate that would stop water from flowing out of the Crevice adit.

#### *Proposed Plan Changes*

An MPDES discharge permit is in place for the current adit drainage. The Crevice water is of good quality and contains no elevated metals. Drill holes that produce most of the discharge water would be plugged. A gravity system of buried pipelines would carry the remainder of the water to discharge in Bear Creek and to the sub-irrigation system north of the tailings storage facility, and to the 1200 decline (1300 adit discharge point) if dilution water is needed to meet applicable standards. A separate permitted water supply well, located within the adit, would continue to provide for fire and potable water use in Jardine. A secured concrete barrier would be constructed in the portal to control access.

#### **E. Portals and Waste Rock Piles**

##### *Existing Plan*

An assessment of acid rock drainage and potential metals pollution from waste rock piles was not contemplated. Portals would be plugged with loose backfill. Eight inches of soil would be spread on the waste rock piles and seeded with a grassland mix. Douglas fir would be planted on the portal pads (tops of piles).

##### *Proposed Plan Changes*

A test program has been initiated to characterize waste rock piles for acid rock drainage and metals solubility. Results of this work will help determine the adequacy of the approved closure strategy. Portals would be plugged with loose backfill and a concrete bulkhead to prevent reentry. Waste rock pile slopes would be graded with small benches and irregularities to facilitate revegetation. Douglas fir and shrubs would be planted on the benches as well as on portal pad area.

#### **F. Revegetation Seed Mixes**

##### *Existing Plan*

Revegetation would be accomplished using two seed mixes, a grassland mix and a mix of grasses, forbs, and

Douglas fir seedlings. Revegetation of the tailings storage facility would include grasses only.

##### *Proposed Plan Changes*

A greater variety of native species is now commercially available to supplement the original seed mixtures. A revegetation test plot program has been initiated. A third seed mix would be added to the plan that includes big sagebrush, rabbitbrush, and Idaho fescue. The seeding rate would be doubled. Revegetation of the tailings storage facility would include shrubs and trees in addition to grasses. The seed mix has been modified per suggestions from the National Park Service.

#### **G. Historic Mine Openings**

##### *Existing Plan*

No reclamation of historic mine openings is required.

##### *Proposed Plan Changes*

TVX would reclaim 12 historic mine openings considered safety hazards.

#### **H. 1300 Adit**

##### *Existing Plan*

The historic 1300 portal drainage was not considered in the closure plan.

##### *Proposed Plan Changes*

The 1300 adit presently discharges to Bear Creek under a MPDES discharge permit. Holes would be drilled in the adit to gravity drain water deeper into the mine workings. There the water would mix with water in the flooded lower workings (1200 level) and dissipate into the bedrock groundwater aquifer. This would eliminate a surface discharge to Bear Creek.